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=> d his

     (FILE 'HOME' ENTERED AT 16:30:17 ON 08 JUN 2006)

     FILE 'CAPLUS' ENTERED AT 16:30:35 ON 08 JUN 2006
L1             5 S PATRICIA A?/AU
L2             0 S FAWCEFF P?/AU
L3            75 S FAWCETT P?/AU
L4             4 S L3 AND PY=1973

     FILE 'STNGUIDE' ENTERED AT 16:32:09 ON 08 JUN 2006

     FILE 'CAPLUS' ENTERED AT 16:33:15 ON 08 JUN 2006

     FILE 'STNGUIDE' ENTERED AT 16:33:16 ON 08 JUN 2006
L5             0 S " PROTOPLAST AND SPHEROPLAST"/CT
L6             0 S "PROTOPLAST AND SPHEROPLAST"/CT

     FILE 'CAPLUS' ENTERED AT 16:33:58 ON 08 JUN 2006
L7          7436 S "PROTOPLAST AND SPHEROPLAST"/CT
L8           460 S  CEPHALOSPORIUM ACREMONIUM/CT
L9          2264 PENICILLIUM CHRYSOGENUM/CT
L10            8 S L8(L)PROTOPLAST
L11           16 S L9(L)PROTOPLAST
L12           22 S L7 AND (L8-9)
L13           25 S L10-11 OR L12
L14            2 S L13 AND ?LACTAM?

     FILE 'REGISTRY' ENTERED AT 16:38:13 ON 08 JUN 2006
L15            3 S  10209-11-7 OR 35353-34-5 OR    847567-43-5
L16            1 S L15 AND  C18 H20 N2 O6 S/MF
L17            1 S  35353-34-5
L18            1 S L15 NOT L16-17

     FILE 'CAPLUS' ENTERED AT 16:40:07 ON 08 JUN 2006
L19            1 S L16
L20            9 S L17
L21            1 S L20 AND L7
L22            1 S L20 AND L8-9
L23            1 S L20 AND (FUSION OR PROTOPLAST)
L24            1 S L21-23
L25            8 S L20 AND PY<2004
L26          128 S L18
L27            2 S L26 AND L7-9
L28         3020 S PENICILLIUM CHRYSOGENUM
L29            1 S L28 AND 48271

     FILE 'STNGUIDE' ENTERED AT 16:48:23 ON 08 JUN 2006

     FILE 'CAPLUS' ENTERED AT 16:50:06 ON 08 JUN 2006
L30          568 S  CEPHALOSPORIUM ACREMONIUM
L31            0 S L30 AND 31697
L32            1 S 31697
L33            0 S L30 AND CCRC
L34            0 S L30 AND DEPOSIT?
L35            2 S L26 AND (L28 OR L30)
L36          136 S L15
L37            1 S L36 AND PROTOPLAST
L38            2 S L36 AND L8-9
L39           60 S ELANDER R?/AU
L40            0 S L39 AND PROTOPLAST
L41            0 S L39 AND FUSION
L42           52 S PROTOPLAST FUSION AND INDUSTRIAL
L43          219 S ELANDER?/AU
L44            0 S L43 AND L42
L45            0 S L42 AND 1982
L46            0 S L42 AND L39
L47            1 S L42 AND L28
L48            0 S L30 AND L42
L49           70 S L30 AND L28
L50            2 S L49 AND FUSION
L51            4 S L49 AND PROTO?

     FILE 'STNGUIDE' ENTERED AT 17:02:59 ON 08 JUN 2006

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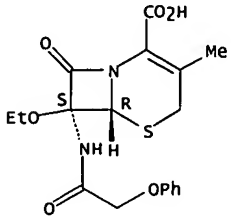
=> d 1-3

L15 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
RN **847567-43-5** REGISTRY
ED Entered STN: 30 Mar 2005
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-ethoxy-3-methyl-8-oxo-7-[(phenoxyacetyl)amino]-, (6R,7S)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3-3A2
FS STEREOSEARCH
MF C18 H20 N2 O6 S
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL

Absolute stereochemistry.

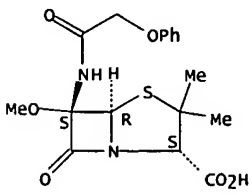


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L15 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
RN **35353-34-5** REGISTRY
ED Entered STN: 16 Nov 1984
CN 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-methoxy-3,3-dimethyl-7-oxo-6-[(phenoxyacetyl)amino]-, (2S,5R,6S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-methoxy-3,3-dimethyl-7-oxo-6-[(phenoxyacetyl)amino]-, [2S-(2α,5α,6α)]-
OTHER NAMES:
CN 6-Methoxypenicillin V
CN A 3-2
FS STEREOSEARCH
MF C17 H20 N2 O6 S
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



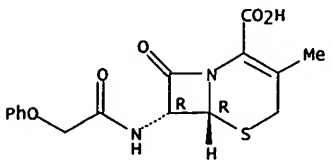
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L15 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2006 ACS on STN
RN **10209-11-7** REGISTRY
ED Entered STN: 16 Nov 1984
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-methyl-8-oxo-7-[(phenoxyacetyl)amino]-, (6R,7R)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-methyl-8-oxo-7-(2-phenoxyacetamido)- (7CI, 8CI)
CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-methyl-8-oxo-7-[(phenoxyacetyl)amino]-, (6R-trans)-
OTHER NAMES:
CN 3-Methyl-7-(2-phenoxyacetamido)-3-cephem-4-carboxylic acid
CN 3-Methyl-7β-(phenoxyacetamido)-3-cephem-4-carboxylic acid

CN 7-Phenoxyacetamido-3-methyl-3-cephem-4-carboxylic acid
CN 7-Phenoxyacetamidodeacetoxycephalosporanic acid
CN 7-Phenoxyacetamidodesacetoxycephalosporanic acid
CN M 4
CN V-Deacetoxycephalosporanic acid
FS STEREOSEARCH
DR 856655-86-2
MF C16 H16 N2 O5 S
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, IFICDB, IFIPAT, IFIUDB, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

128 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
128 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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=> d que
L15           3 SEA FILE=REGISTRY ABB=ON  PLU=ON  10209-11-7 OR 35353-34-5 OR
                847567-43-5
L16           1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L15 AND  C18 H20 N2 O6 S/MF
L19           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L16


=> d bib abs hitstr

L19  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:220011  CAPLUS
DN   142:296774
TI   Method for producing novel beta-lactam antibiotic from protoplast fusion
     strain
IN   Chen, Chin-Chu; Feng, Ying-Shih; Chyau, Charng-Cherng; Chen, Ching-Nung;
     Huang, Shih-Jeng; Chen, Yen-Lien; Tseng, Hung-Ping; Chung, Wei-Hui; Chen,
     Yi-HSuan
PA   Taiwan
SO   U.S. Pat. Appl. Publ., 19 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   US 2005054031        A1    20050310    US 2003-657199          20030909
PRAI US 2003-657199               20030909
OS   CASREACT 142:296774
AB   The present invention provides a method for producing novel β-lactam
     antibiotics from a protoplast fusion strain.  The method is to
     fermentatively culture the protoplast fusion strain of Penicillium
     chrysogenum and Cephalosporium acremonium.  The fermentation filtrate is
     isolated, lyophilized, and extracted by acetone or acetone/MeOH.  The extract is
     concentrated by decompression, and then analyzed by preparation type HPLC to isolate
     the active antibiotic compound
IT   847567-43-5P, Antibiotic 3-3-A-2
     RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); NPO
     (Natural product occurrence); PRP (Properties); PUR (Purification or
     recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
        (producing novel β-lactam antibiotic from protoplast fusion
        strain)
RN   847567-43-5  CAPLUS
CN   5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
     7-ethoxy-3-methyl-8-oxo-7-[(phenoxyacetyl)amino]-, (6R,7S)- (9CI)  (CA
     INDEX NAME)

Absolute stereochemistry.
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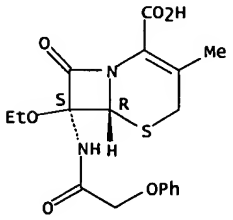


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=> d que
L7          7436 SEA FILE=CAPLUS ABB=ON  PLU=ON  "PROTOPLAST AND SPHEROPLAST"/CT

L8           460 SEA FILE=CAPLUS ABB=ON  PLU=ON  CEPHALOSPORIUM ACREMONIUM/CT
L9          2264 SEA FILE=CAPLUS ABB=ON  PLU=ON  PENICILLIUM CHRYSOGENUM/CT
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  35353-34-5
L20            9 SEA FILE=CAPLUS ABB=ON  PLU=ON  L17
L21            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 AND L7
L22            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 AND (L8 OR L9)
L23            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 AND (FUSION OR PROTOPLAST)

L24            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23)


=> d bib ab

L24  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:220011  CAPLUS
DN   142:296774
TI   Method for producing novel beta-lactam antibiotic from protoplast
     fusion strain
IN   Chen, Chin-Chu; Feng, Ying-Shih; Chyau, Charng-Cherng; Chen, Ching-Nung;
     Huang, Shih-Jeng; Chen, Yen-Lien; Tseng, Hung-Ping; Chung, Wei-Hui; Chen,
     Yi-Hsuan
PA   Taiwan
SO   U.S. Pat. Appl. Publ., 19 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   US 2005054031        A1    20050310    US 2003-657199         20030909
PRAI US 2003-657199               20030909
OS   CASREACT 142:296774
AB   The present invention provides a method for producing novel β-lactam
     antibiotics from a protoplast fusion strain.  The
     method is to fermentatively culture the protoplast
     fusion strain of Penicillium chrysogenum and Cephalosporium
     acremonium.  The fermentation filtrate is isolated, lyophilized, and extracted by
     acetone or acetone/MeOH.  The extract is concentrated by decompression, and then
     analyzed by preparation type HPLC to isolate the active antibiotic compound


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L24  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   35353-34-5P, Antibiotic A-3-2
     RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); NPO
     (Natural product occurrence); PRP (Properties); PUR (Purification or
     recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
        (producing novel β-lactam antibiotic from  protoplast
        fusion strain)
RN   35353-34-5  CAPLUS
CN   4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-methoxy-3,3-
     dimethyl-7-oxo-6-[(phenoxyacetyl)amino]-, (2S,5R,6S)- (9CI)  (CA INDEX
     NAME)

Absolute stereochemistry.
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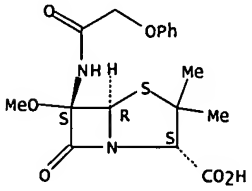


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=> d bib ab 1-8

L25 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1981:407272 CAPLUS
DN 95:7272
TI Penicillin 1,1-dioxides and their use in pharmaceutical compositions
IN Niemers, Ekkehard; Koenig, Hans Bodo; Schroeck, Wilfried; Metzger, Karl
PA Bayer A.-G., Fed. Rep. Ger.
SO Ger. Offen., 36 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2925963	A1	19810122	DE 1979-2925963	19790627 <--
	US 4344955	A	19820817	US 1980-158975	19800612 <--
	GB 2053216	A	19810204	GB 1980-20647	19800624 <--
	GB 2053216	B2	19830420		
	JP 56007790	A2	19810127	JP 1980-85255	19800625 <--
PRAI	DE 1979-2925963	A	19790627		

OS MARPAT 95:7272
AB Penicillin dioxides I (R = H, aliphatic, alkoxy, aryl, aryloxy, heterocyclic, acyl, amino; R1 = H, acyl, alkylsulfonyl, arylsulfonyl, alkyl; R2 = H, alkoxy; R3 = H, ester group) were prepared for used as β-lactamase inhibitors and bactericides. Thus 6-amino-6-methoxypenicillanic acid was acylated with (EtO)3CCOOCOCMe3 and oxidized with H2O2 to give I [R = C(OEt)3, R1 = H, R2 = OMe, R3 = Na] which at 1 μg/mL was bactericidal against all Staphylococcus aureus.

L25 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1978:406318 CAPLUS
DN 89:6318
TI Derivatives of 6-aminopenicillanic acid
IN Christensen, Burton G.; Cama, Lovji D.
PA Merck and Co., Inc., USA
SO U.S., 11 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4071529	A	19780131	US 1974-495010	19740805 <--
	US 4035359	A	19770712	US 1975-599266	19750725 <--
	US 4154845	A	19790515	US 1977-831465	19770908 <--
PRAI	US 1971-149349	A2	19710602		
	US 1974-495010	A3	19740805		

AB Penicillins I (n = 0, 1; R = H, lower alkyl, Me3Si, PhCH2, methoxybenzyl, C2H2Cl3; R1 = lower alkylthio) and their pharmaceutically acceptable salts were prepared by 4 methods. Thus, benzyl 6-aminopenicillanate-4-MeC6H4SO3H was diazotized in CH2Cl2 with NaNO2 and 4-MeC6H4SO3H to give benzyl 6-diazopenicillanate, which was treated with NEt3.HN3 and BrN3 at 5°; the resulting benzyl 6β-azido-6-bromopenicillanate was methoxylated with AgBF4 in MeOH, and the benzyl 6β-azido-6-methoxypenicillanate thus obtained hydrogenated in Ac2O over Pt oxide. Debenzylation of the resulting benzyl 6β-acetamido-6-methoxypenicillanate with H2 over Pd/C in dioxane-H2O-MeOH gave 6β-acetamido-6-methoxypenicillanic acid.

L25 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1977:527029 CAPLUS
DN 87:127029
TI Theoretical studies on β-lactam antibiotics. I. Conformational similarity of penicillins and cephalosporins to X-D-alanyl-D-alanine and correlation of their structure with activity
AU Virudachalam, R.; Rao, V. S. R.
CS Mol. Biophys. Unit, Indian Inst. Sci., Bangalore, India
SO International Journal of Peptide & Protein Research (1977), 10(1), 51-9
CODEN: IJPPC3; ISSN: 0367-8377
DT Journal
LA English
AB The substrate analog hypothesis proposed for the mechanism of the action of penicillins and cephalosporins is examined by stereochem. criteria. These β-lactam antibiotics assume conformations similar to X-D-alanyl-D-alanine due to the presence of the lactam ring. The model proposed for the activity of these antibiotics differs considerably from the earlier models, mainly in .vphi.2 rotational angle which determines the conformation of the aminoacyl group. The inactivity of C6 or C7 epimers and the effect of various substitutions at 6α or 7α and C2 positions of penicillins and cephalosporins on the biol. activity are explained.

L25 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1977:468340 CAPLUS
DN 87:68340
TI 2-(4-Methoxyoxazolidinone-4-yl)thiazolidine t-butyl esters
IN Ashbrook, Charles W.; Kaiser, Gary V.; Koppel, Gary A.
PA Eli Lilly and Co., USA
SO U.S., 6 pp.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4012410	A	19770315	US 1975-568070	19750414 <--
PRAI	US 1972-222294	A3	19720131		

AB Thiazolidine I was prepared by methoxylating penicillin V, esterifying II (R = Me, R1 = H), hydrolyzing II (R = Me, R1 = CMe3), and cyclizing II (R = H, R1 = CMe3) with dicyclohexylcarbodiimide. Treatment of I with HCO2H gave 6-methoxy-6-phenoxyacetamidopenicillanic acid.

L25 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1975:86275 CAPLUS
DN 82:86275
TI 6α-Substituted penicillins
AU Lo, Young S.; Sheehan, John C.
CS Dep. Chem., Massachusetts Inst. Technol., Cambridge, MA, USA
SO Journal of Organic Chemistry (1975), 40(2), 191-2
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
AB 6α-Methoxy-6β-phenoxyacetamidopenicillanic acid (I, R = MeO) and 6α-cyano-6β-phenoxyacetamidopenicillanic acid (I, R = CN) were prepared from benzyl 6-oxopenicillanate. Both compds. showed weak antibacterial activities.

L25 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1974:514876 CAPLUS
DN 81:114876
TI Effect of 6-α substitution in penicillins and 7-α substitution in cephalosporins upon β-lactam reactivity
AU Indelicato, Joseph M.; Wilham, William L.
CS Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, USA
SO Journal of Medicinal Chemistry (1974), 17(5), 528-9
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
AB The rates of base hydrolysis of a series of α-substituted penicillins and cephalosporins were determined by constant pH titration or measured spectrophotometrically. The results showed 6-α substitution in penicillins gave compds. with less reactive β-lactams than the parent compound, due to steric rather than polar effects. The 7-α substitution in cephalosporins had no pronounced effect on β-lactam reactivity. The relation of chemical reactivity to antibacterial activity was discussed.

L25 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1973:38529 CAPLUS
DN 78:38529
TI Biochemical and microbiological studies on 6-substituted penicillins
AU Indelicato, Joseph M.; Spitzer, Wayne A.; Koppel, Gary A.
CS Lilly Res. Lab., Eli Lilly & Company, Indianapolis, IN, USA
SO Journal of Antibiotics (1972), 25(10), 627-8
CODEN: JANTAJ; ISSN: 0021-8820
DT Journal
LA English
AB The min. inhibitory concentration for Escherichia coli and the concentration required for 50% inhibition of transpeptidase [9059-29-4] increased when the 6-positions of penicillin V [87-08-1] and penicillin G [61-33-6] were substituted by CH3-, CH3O-, or CH3S- groups, and by CH3-, CH3O-, or C2H5O- groups, resp. These substitutions also decreased the reactivity of the β-lactam at pH 10.0 in all cases tested. A steric effect rather than a polar effect may account for the decreased reactivity.

L25 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1972:99649 CAPLUS
DN 76:99649
TI Antibiotic 6-substituted-6-aminopenicillanic acids and their derivatives
IN Christensen, Burton G.; Cama, Lovji, D.
PA Merck and Co., Inc.
SO Ger. Offen., 72 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2129637	A	19720105	DE 1971-2129637	19710615 <--
	DE 2129637	C2	19820701		
	GB 1339007	A	19731128	GB 1970-29157	19700616 <--
	ZA 7103228	A	19721227	ZA 1971-3228	19710518 <--
	IL 36990	A1	19761231	IL 1971-36990	19710607 <--
	CA 983478	A1	19760210	CA 1971-115149	19710608 <--
	CS 190359	P	19790531	CS 1971-4190	19710608 <--
	HU 168077	P	19760228	HU 1971-ME1667	19710609 <--
	SE 391525	B	19770221	SE 1971-7459	19710609 <--
	AT 311550	B	19731126	AT 1971-5116	19710614 <--
	AT 320860	B	19750310	AT 1973-2794	19710614 <--
	ES 392227	A1	19750401	ES 1971-392227	19710614 <--
	AT 322738	B	19750610	AT 1971-322738	19710614 <--
	PL 98634	P	19780531	PL 1971-148797	19710614 <--
	SU 460629	D	19750215	SU 1971-1673668	19710615 <--

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     RO 58733           P     19751115    RO 1971-70720          19710615 <--
     RO 58734           P     19760115    RO 1971-70721          19710615 <--
     DK 133301          B     19760426    DK 1971-2919           19710615 <--
     CH 579572          A     19760915    CH 1971-8752           19710615 <--
     RO 61560           P     19770215    RO 1971-67309          19710615 <--
     FI 57418           B     19800430    FI 1971-1674           19710615 <--
     FI 57418           C     19800811
     NL 7108283         A     19711220    NL 1971-8283           19710616 <--
     NL 178876          B     19860102
     NL 178876          C     19860602
     FR 2100768         A5    19720324    FR 1971-21921          19710616 <--
     FR 2100768         B1    19741115
     JP 57015117        B4    19820329    JP 1971-43231          19710616 <--
     HU 167333          P     19750927    HU 1973-ME1377         19730104 <--
     SE 7404874         A     19740410    SE 1974-4874           19740410 <--
     ES 419392          A1    19761016    ES 1974-419392         19741005 <--
PRAI GB 1970-29157      A     19700616
     GB 1971-29157      A     19710430
     HU 1971-ME1377     A     19710609
AB   The penicillin derivs. I (R = MeO, MeOCH2, EtO, NH2; R1 = H, Ph, PhO,
     2-furyl, 2-thienyl; R2 = H, NH2, CO2Na; R3 = H, Na) were prepared from
     benzyl 6-aminopenicillanate.  Thus, benzyl 6-aminopenicillanate was
     diazotized, converted to its azido derivative with Et3N.HN3, and treated with
     Br-NaN3 to give benzyl 6β-azido-6-bromopenicillanate (II).  Treatment
     of II with MeOH, followed by Ac2O gave I (R = MeO, R1 = R2 = H, R3 =
     CH2Ph) which was converted to the free acid by hydrogenation over Pd-C and
     treated with NaHCO3 to give I (R = MeO, R1 = R2 = H, R3 = Na).


=> d que
L17             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  35353-34-5
L20             9 SEA FILE=CAPLUS ABB=ON  PLU=ON  L17
L25             8 SEA FILE=CAPLUS ABB=ON  PLU=ON  L20 AND PY<2004


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L27 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:379879 CAPLUS
DN 125:56382
TI Manufacture of beta-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro
IN Kaasgaard, Svend; Kristiansen, Claus Nyegaard; Moelgaard, Henrik
PA Gist-Brocades B.V., Neth.
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9610085	A1	19960404	WO 1995-EP3857	19950927
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2201485	AA	19960404	CA 1995-2201485	19950927
	AU 9537440	A1	19960419	AU 1995-37440	19950927
	AU 701665	B2	19990204		
	EP 783582	A1	19970716	EP 1995-935410	19950927
	EP 783582	B1	20050302		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1162337	A	19971015	CN 1995-196001	19950927
	HU 77042	A2	19980302	HU 1997-1925	19950927
	JP 10506287	T2	19980623	JP 1995-511394	19950927
	AT 290084	E	20050315	AT 1995-935410	19950927
	ES 2236714	T3	20050716	ES 1995-935410	19950927
	US 5942411	A	19990824	US 1997-817010	19970619
	US 6180360	B1	20010130	US 1999-333645	19990615
PRAI	DK 1994-1117	A	19940928		
	WO 1995-EP3857	W	19950927		

AB The present invention relates to biosynthesis β-lactam antibiotics. More specifically, the invention relates to processes of producing β-lactam antibiotics in vivo and in vitro. Also contemplated is the novel enzyme phenoxyacetyl CoA synthetase. Further, the invention relates to a DNA construct encoding said novel enzyme, a recombinant vector or transformation vehicle comprising said DNA construct, and finally a cell comprising said DNA construct or recombinant vector. The phenoxyacetyl CoA synthetase of Penicillium chrysogenum was purified and characterized. The enzyme was used in an in vitro system containing phenoxyacetic acid or phenylacetic acid, CoA, 6-aminopenicillanic acid to prepare penicillin V and penicillin G.

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L27 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
IC ICM C12N015-52
ICS C12P035-04; C12P037-04; C12N009-00; C12P017-10; C12P017-14; C12N015-80; C12N001-21; C12N001-15
CC 16-2 (Fermentation and Bioindustrial Chemistry)
Section cross-reference(s): 3, 7
ST Penicillium phenoxyacetyl CoA synthetase purifn characterization; beta lactam antibiotic recombinant microorganism ligase
IT Actinomycetes
Aspergillus
Aspergillus nidulans
Bacillus
Bacteria
Cephalosporium
Cephalosporium acremonium
Cercospora
Microspora
Nocardia
Penicillium
Penicillium chrysogenum
Penicillium notatum
Streptomyces
Streptomyces clavuligerus
Streptomyces lactamdurans
Temperature effects, biological
pH
(manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)
IT Carboxylic acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)
IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(pcbDE, synchronization of expression of ligase gene and; manufacture of

β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

IT Fungi
(filamentous, manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

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IT Lactams
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(β-, monocyclic, manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

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IT 61-33-6P, Penicillin G, preparation 87-08-1P, Penicillin V 1406-05-9P, Penicillin **10209-11-7P**, V-Deacetoxycephalosporanic acid 11111-12-9P, Cephalosporin 27255-72-7P, G-Deacetoxycephalosporanic acid 27920-91-8P, Adipoyl-7-aminocephalosporanic acid 63744-80-9P, Cephamycin 76631-42-0P, Nocardicin 80154-48-9P, Adipoyl-7-aminodeacetoxycephalosporanic acid 178152-49-3P, Isocephalosporin C
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IT 85-61-0, Coenzyme A, biological studies 103-82-2, Phenylacetic acid, biological studies 122-59-8, Phenoxyacetic acid 124-04-9, Hexanedioic acid, biological studies 142-62-1, Hexanoic acid, biological studies 551-16-6, 6-Aminopenicillanic acid 957-68-6, 7-Aminocephalosporanic acid 1918-77-0, 2-Thiopheneacetic acid 6964-21-2, 3-Thiopheneacetic acid 15690-38-7, 7-Aminodeacetylcephalosporanic acid 22252-43-3, 7-Aminodesacetoxycephalosporanic acid 54576-90-8 58678-43-6, Isopenicillin N
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

IT 57219-71-3P
RL: CAT (Catalyst use); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); USES (Uses)
(manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

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L27 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN
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DN 125:56382
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Cercospora
Microspora
Nocardia
Penicillium
Penicillium chrysogenum
Penicillium notatum
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Streptomyces lactamdurans
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RL: CAT (Catalyst use); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); USES (Uses)
(manufacture of β-lactam antibiotics with microorganisms with increased phenoxyacetyl CoA synthase activity or with the enzyme in vitro)

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L8           460 SEA FILE=CAPLUS ABB=ON  PLU=ON  CEPHALOSPORIUM ACREMONIUM/CT
L9          2264 SEA FILE=CAPLUS ABB=ON  PLU=ON  PENICILLIUM CHRYSOGENUM/CT
L15            3 SEA FILE=REGISTRY ABB=ON  PLU=ON  10209-11-7 OR 35353-34-5 OR
                 847567-43-5
L16            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L15 AND  C18 H20 N2 O6 S/MF
L17            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  35353-34-5
L18            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  L15 NOT (L16 OR L17)
L26          128 SEA FILE=CAPLUS ABB=ON  PLU=ON  L18
L27            2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L26 AND (L7 OR L8 OR L9)


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L27  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   10209-11-7P, Antibiotic M-4
     RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); NPO
     (Natural product occurrence); PRP (Properties); PUR (Purification or
     recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
        (producing novel β-lactam antibiotic from protoplast fusion
        strain)
RN   10209-11-7  CAPLUS
CN   5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,
     3-methyl-8-oxo-7-[(phenoxyacetyl)amino]-, (6R,7R)- (9CI)  (CA INDEX NAME)

Absolute stereochemistry.
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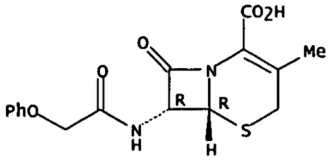
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